

# Oracle CRM 11i "Hornet" Release: JTF Page Prefabrication

[REDACTED]

CRM Technology and Architecture

[REDACTED]

[REDACTED] ORACLE [REDACTED]

CRM Technology & Architecture: Page Prefabrication 1

## What is JTF Prefab Solving?

- 20 Milli Sec Page Retrievals vs. Few Secs
- OSO Pages for Sales, Marketing personnel
  - Page Content is Dynamic based on the user, Caching will NOT Solve it
  - Prefabricate it (my.yahoo.com)!

[REDACTED] ORACLE [REDACTED]

CRM Technology & Architecture: Page Prefabrication 2

## **JTF Prefab Applications (OSO) Should Provide**

- List of JSP pages in application (70 pages)
- List of read-only JSP pages (30 pages)
- APP ID, RESP ID for the application
- No Changes To Application Software & Database Schema ( *non-intrusive* )

ORACLE

CRM Technology & Architecture: Page Prefabrication

3

## **JTF Prefab OSO Prefabrication**

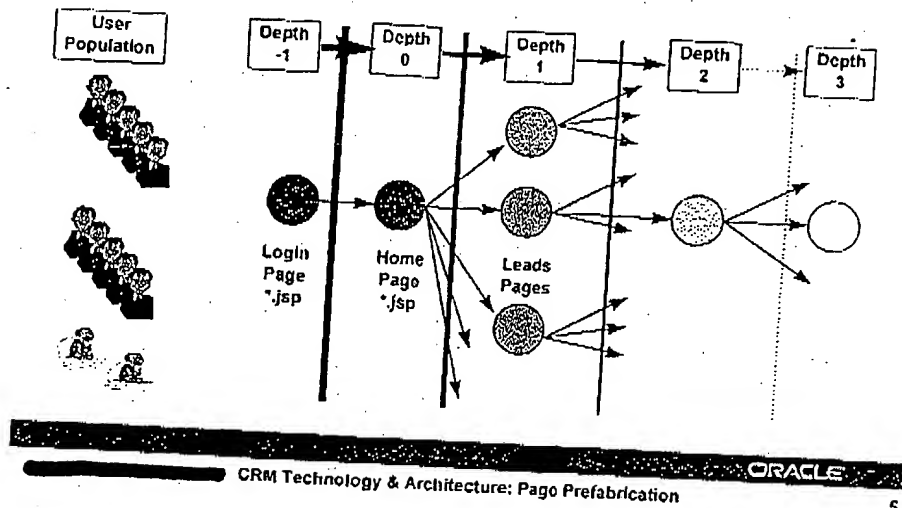
- Total JSP pages: 75
  - read-only pages: 30
- For a sales force of 100:
  - 3000 pages to prefabricate
  - generate per min or 10 mins
- MY.YAHOO.COM:
  - 6 million pages
  - every few minutes

ORACLE

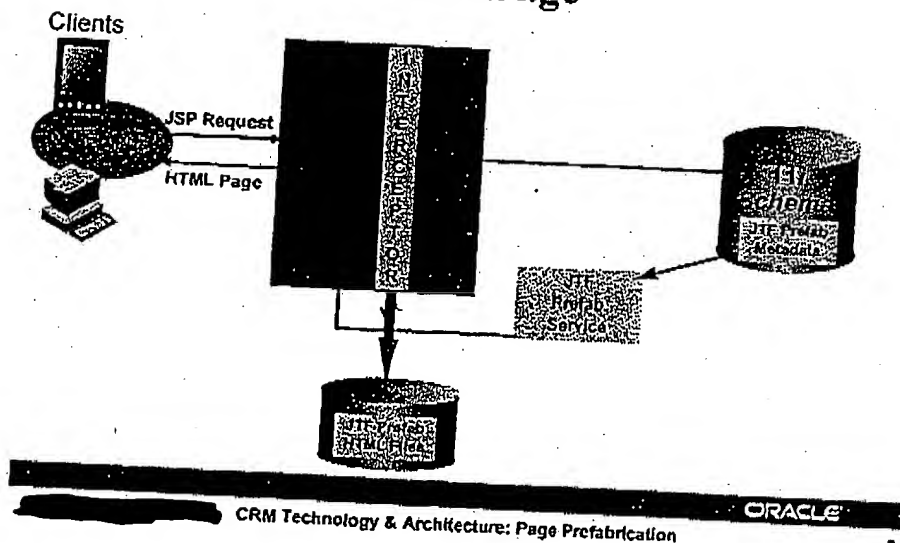
CRM Technology & Architecture: Page Prefabrication

4

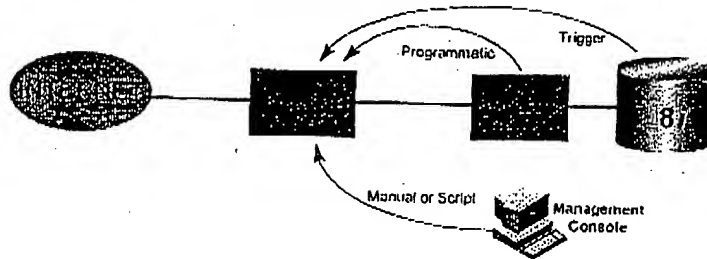
## JTF Prefab : Fabrication Rate Depth .vs. Staleness of Home Page



## JTF Prefab Dynamic -> Static Page



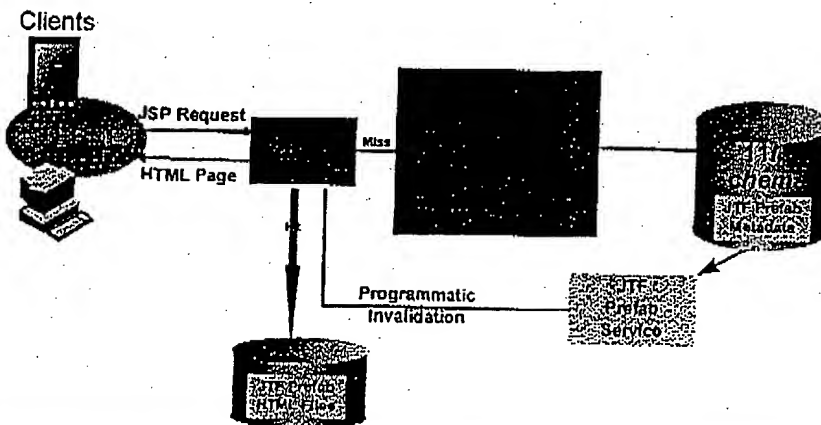
## IAS Web Cache Calypso Invalidation



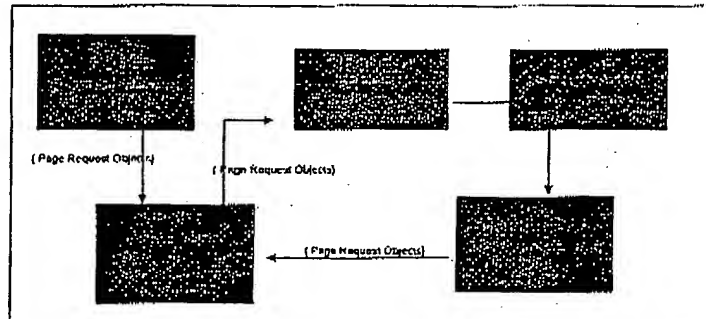
```
GET /x-oracle-cache-invalidate HTTP/1.0
X-Oracle-Cache-Invalidate-URL-Prefix: /catalog
X-Oracle-Cache-Invalidate-Level: 0
```

*Invalidates all URLs starting with /catalog (e.g., entire catalog)  
with severity of 0 (i.e., never serve these pages state)*

## JTF Prefab Working with Calypso



## JTF Prefab Service Application Components



## JTF Prefab Service Algorithm

- For RESP ID, APP ID:
  - Get the list of FND USERS
  - Run the prefabricator at  $n$  min (10 min) intervals
- Reduce # of pages to prefabricate using:
  - user access pattern
  - usage statistics
  - etc.

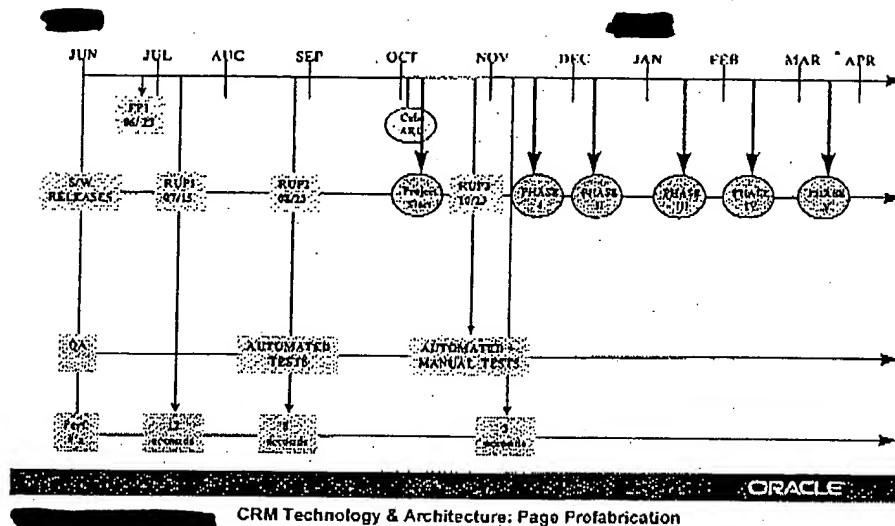
## JTF Prefab Invalidation Policy

- Timer based invalidation:
  - configure intervals for page regeneration
- Login based invalidation:
  - when user logs in, re-generate user-specific pages
- Event based invalidation:
  - transactional URLs invalidate set of dependent pages

## Caching .vs. Prefabrication Solutions

	<i>Caching</i>	<i>Prefabrication</i>
<b>Problem</b>	Repetitive fetching of same content	First time login of user access patterns
<b>Solutions</b>	Reactive	Pro-active
<b>Pros</b>	App. Neutral,	App. Specific, Utilizes excess CPU & Disk on mid-tier boxes.
<b>Cons</b>	Slow for first time user access.	Too many pages prefabricated

## CRM JTF: Page Prefabrication Schedule



CRM Technology & Architecture: Page Prefabrication

## CRM JTF : Page Prefabrication Schedule

Phase	Date	Functionality
0		Session Mgmt., Intercept URI requests & serve Fab-Pages
I		Refresh Sales & iSTORE pages in 'm' minutes
II		Feedback of HOT users/ pages
III		Selectively Fabricate pages & "N" Mid-tiers support
IV		Set up and Admin Screens
V		Release
Risk		Selectivity Algorithms & Ease of set up.

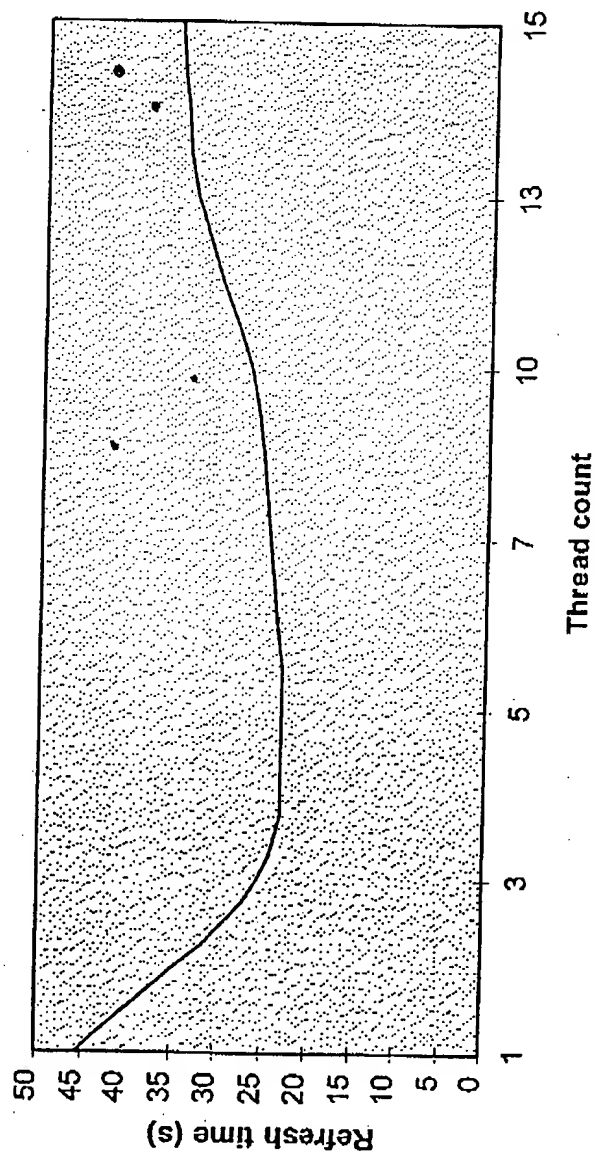
ORACLE

CRM Technology & Architecture: Page Prefabrication

14

# Prefabrication Statistics

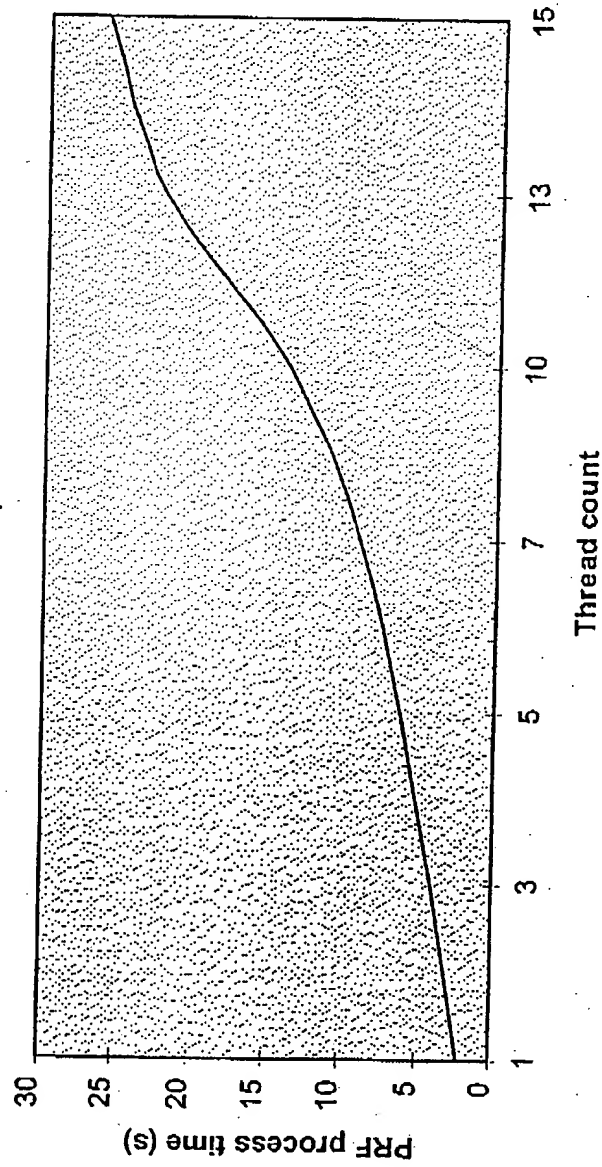
Refresh time vs Thread count (20 PRBs)





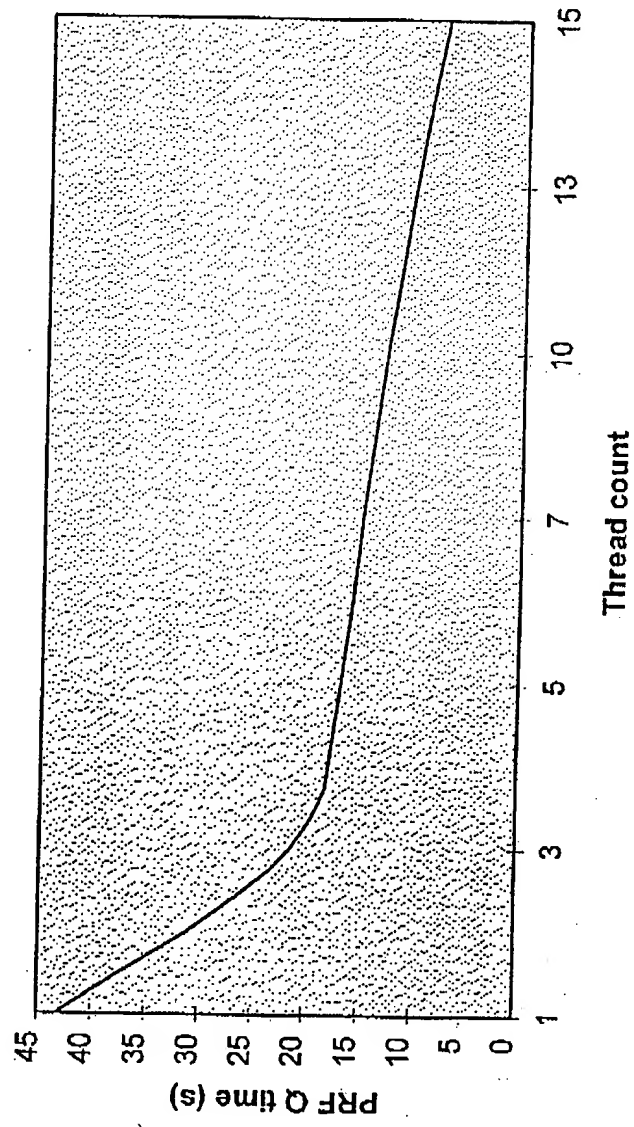
# Prefabrication Statistics

PRF process time vs Thread count  
(20 PRBs)

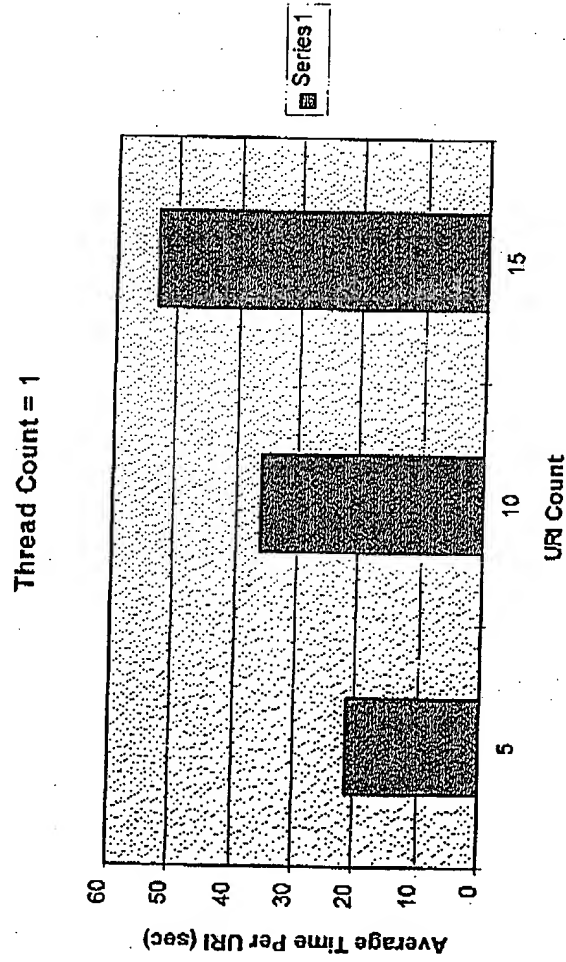


# Prefabrication Statistics

PRF Q time vs Thread count (20 PRBs)



# Prefabrication Statistics



Estimate for 7000 URIs = 3010sec per URI (50 min/URI)

# Response Time For Home Page

Without Prefabrication: 3.76 sec

With Prefabrication: 0.53 sec

(Values measured using Load Runner)

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☒ **BLACK BORDERS**

☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**

☐ **FADED TEXT OR DRAWING**

☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**

☐ **SKEWED/SLANTED IMAGES**

☒ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**

☒ **GRAY SCALE DOCUMENTS**

☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**

☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**

☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**